

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: FAIL-SAFE

Report Number: P561498

Luminaire Tested: FSR-12-4-LD4-2HI-50-UNV-82-94-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561498
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-5)
Test Lab: INNOVATION CENTER
Issue Date: 7/20/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-12-4-LD4-2HI-50-UNV-82-94-EDD-90
Description: 1X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6787.0 lumens
Efficiency: N/A
Efficacy: 78.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

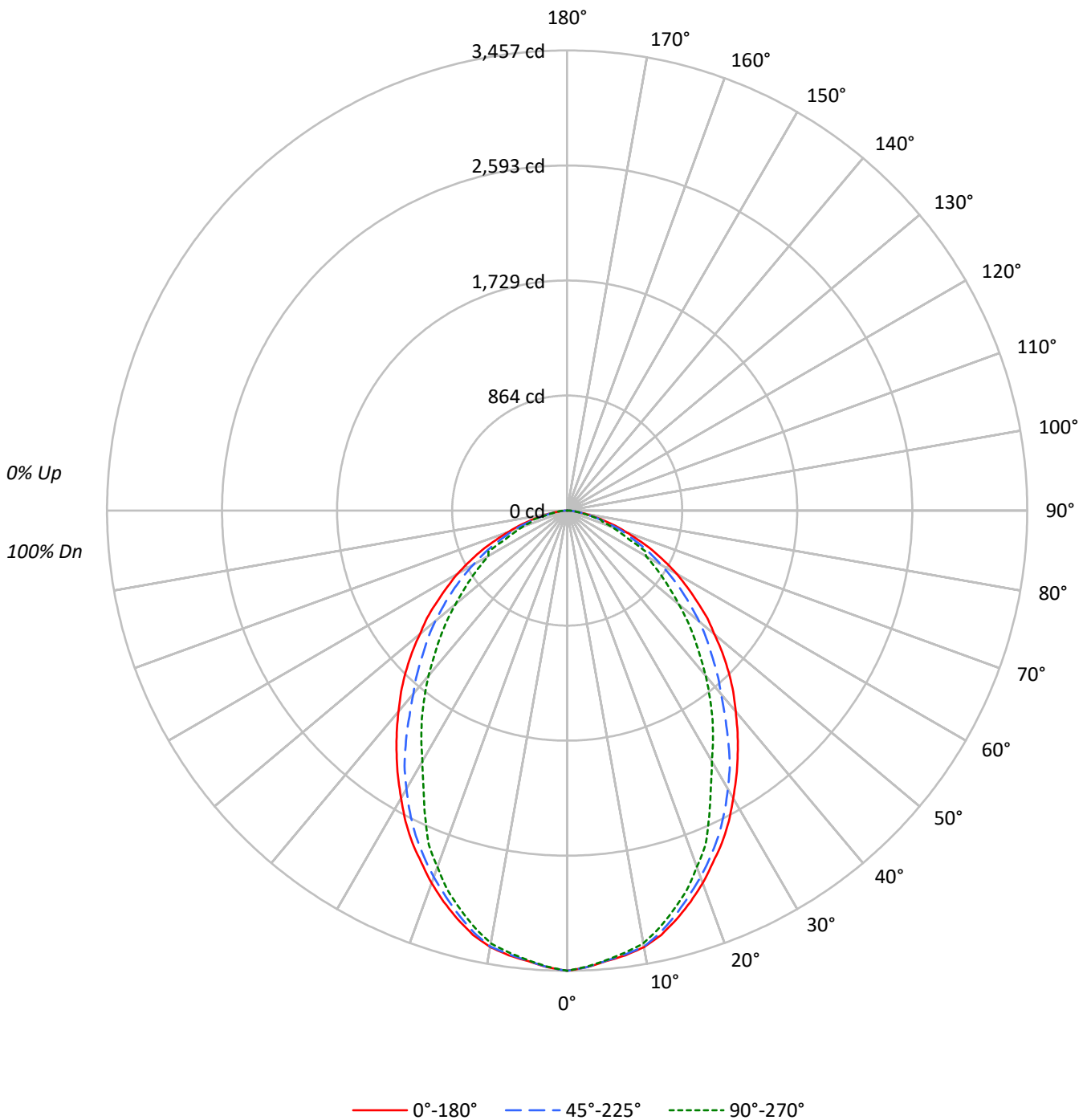
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9303	9303	9303
5°	9177	9166	9155
10°	9097	9086	9021
15°	8852	8763	8640
20°	8527	8389	8161
25°	8176	7998	7500
30°	7750	7501	6756
35°	7340	6933	6250
40°	6922	6318	5686
45°	6525	5841	5141
50°	6040	5421	4585
55°	5588	4913	4107
60°	5119	4388	3678
65°	4504	3843	3258
70°	3710	3365	2767
75°	2951	2576	2701
80°	1982	1858	1734
85°	1235	1482	1729

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6525 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	321.8	4.7
10°-20°	883.2	13.0
20°-30°	1222.7	18.0
30°-40°	1303.8	19.2
40°-50°	1189.4	17.5
50°-60°	931.8	13.7
60°-70°	607.3	8.9
70°-80°	269.1	4.0
80°-90°	57.8	0.9
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	2427.8	35.8
0°-40°	3731.6	55.0
0°-60°	5852.8	86.2
0°-90°	6787.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6787.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3457	3457	3457	3457	3457	
5°	3397	3393	3393	3389	3389	322
15°	3177	3177	3146	3114	3102	893
25°	2754	2738	2694	2598	2526	1264
35°	2234	2218	2110	1950	1902	1397
45°	1715	1679	1535	1407	1351	1321
55°	1191	1155	1047	923	875	1068
65°	707	668	604	616	512	697
75°	284	264	248	236	260	304
85°	40	44	48	52	56	55
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3457.2	3457.2	3457.2	3457.2	3457.2
2.5°	3433.2	3433.2	3433.2	3429.2	3429.2
5°	3397.3	3393.3	3393.3	3389.3	3389.3
7.5°	3369.3	3365.3	3361.3	3357.3	3349.3
10°	3329.3	3329.3	3325.3	3305.3	3301.3
12.5°	3265.4	3261.4	3245.4	3217.4	3209.4
15°	3177.4	3177.4	3145.5	3113.5	3101.5
17.5°	3081.5	3077.5	3037.5	3005.6	2989.6
20°	2977.6	2969.6	2929.6	2877.7	2849.7
22.5°	2861.7	2861.7	2813.7	2745.8	2717.8
25°	2753.8	2737.8	2693.8	2597.9	2526.0
27.5°	2629.9	2605.9	2557.9	2422.0	2338.1
30°	2494.0	2482.0	2414.0	2238.2	2174.2
32.5°	2366.1	2346.1	2274.2	2090.3	2038.4
35°	2234.2	2218.2	2110.3	1950.4	1902.5
37.5°	2102.3	2082.3	1946.4	1818.5	1758.6
40°	1970.4	1946.4	1798.5	1682.6	1618.7
42.5°	1846.5	1814.5	1670.7	1546.8	1474.8
45°	1714.6	1678.6	1534.8	1406.9	1350.9
47.5°	1582.7	1550.7	1418.9	1287.0	1223.0
50°	1442.8	1414.9	1295.0	1163.1	1095.1
52.5°	1326.9	1283.0	1167.1	1035.2	979.2
55°	1191.0	1155.1	1047.2	923.3	875.3
57.5°	1067.1	1031.2	931.2	815.3	775.4
60°	951.2	899.3	815.3	715.4	683.4
62.5°	823.3	783.4	711.4	627.5	667.5
65°	707.4	667.5	603.5	615.5	511.6
67.5°	579.5	559.5	503.6	447.6	431.7
70°	471.6	447.6	427.7	367.7	351.7
72.5°	375.7	351.7	323.7	291.8	279.8
75°	283.8	263.8	247.8	235.8	259.8
77.5°	195.8	187.8	175.9	163.9	159.9
80°	127.9	123.9	119.9	115.9	111.9
82.5°	75.9	75.9	75.9	75.9	75.9
85°	40.0	44.0	48.0	52.0	56.0
87.5°	24.0	24.0	28.0	32.0	36.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)